After entry of the amendments made herein, the claims under consideration in this application will read as follows.

1. (Five times amended) A purified and isolated nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of (1) nucleotides 91 -1203 of the porcine nucleic acid sequence with SEQ ID NO: 7, (2) a sequence encoding a porcine polypeptide having α-1,3 galactosyltransferase activity and having the amino acid sequence of SEQ ID NO:10, and (3) a sequence complementary to the sequence of (1) or (2).

2. (Three times amended) A host cell comprising a recombinant nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of (1) nucleotides 91 - 1203 of the porcine nucleic acid sequence with SEQ ID NO: 7, (2) a sequence encoding a porcine polypeptide having α-1,3 galactosyltransferase activity and having the amino acid sequence of SEQ ID NO:10, and (3) a sequence complementary to the sequence of (1) or (2), wherein the cell is *in vitro*.

3. (Thrice amended) A porcine α-1,3 galactosyltransferase encoded by a nucleic acid molecule comprising a nucleic acid sequence selected from the group consisting of (1) nucleotides 91 -1203 of the porcine nucleic acid sequence with SEQ ID NO: 7, (2) a sequence encoding a porcine polypeptide having α-1,3 galactosyltransferase activity and having the amino acid sequence of SEQ ID NO:10, and (3) a sequence complementary to the sequence of (1) or (2), wherein the polypeptide is expressed from the cell of claim 2 and is encoded by the recombinant nucleic acid molecule.

46. A DNA construct comprising a disrupted porcine α-1,3 galactosyltransferase gene, wherein the disruption is by insertion of an exogenous sequence into said gene such that the disruption prevents expression of functional α-1,3 galactosyltransferase, wherein the gene, prior to disruption, encodes a porcine α-1,3 galactosyltransferase with an amino acid sequence of SEQ ID NO:10.

47. The DNA construct of claim 46, wherein said disruption is within exon 4, exon 7, exon 8, or exon 9 of the porcine α-1,3 galactosyltransferase gene.

48. The DNA construct of claim 46, wherein said exogenous sequence is a selectable marker.

49. The DNA construct of claim 48, wherein said selectable marker is selected from the group consisting of the neo^R gene and the hyg^R gene.

50. The DNA construct of claim 46, wherein said exogenous sequence is flanked at its 5' and 3' ends by FRT DNA elements, and wherein stop codons have been inserted 3' to the selectable marker for each of the three reading frames for the porcine α-1,3 galactosyltransferase gene.

51. A method for generating a porcine cell comprising at least one inactivated α-1,3 galactosyltransferase gene, the method comprising:

(a) providing a plurality of porcine cells;

(b) introducing into said cells the DNA construct of claim 46;

(c) incubating said cells such that homologous recombination occurs between the chromosomal sequence encoding α-1,3 galactosyltransferase and the introduced DNA construct comprising the disrupted α-1,3 galactosyltransferase gene; and

(d) identifying a porcine cell comprising at least one inactivated α-1,3 galactosyltransferase gene,

wherein the gene, prior to disruption, encodes a porcine α-1,3 galactosyltransferase with an amino acid sequence of SEQ ID NO:10.

67. (Amended) A porcine cell comprising at least one disrupted α-1,3 galactosyltransferase gene, wherein the disruption is by insertion of an exogenous sequence into said gene such that the disruption prevents expression of functional α-1,3 galactosyltransferase and wherein the gene, prior to disruption, encodes the porcine α-1,3 galactosyltransferase with an amino acid sequence of SEQ ID NO:10, wherein the cell is *in vitro*.

70. The porcine cell of claim 67, wherein said disruption is within exon 4, exon 7, exon 8, or exon 9 of the porcine α-1,3 galactosyltransferase gene.

71. The porcine cell of claim 67, wherein said exogenous sequence is a selectable marker.

72. The porcine cell of claim 71, wherein said selectable marker is selected from the group consisting of the neo^R gene and the hyg^R gene.

73. The porcine cell of claim 67, wherein said exogenous sequence is flanked at its 5' and 3' ends by FRT DNA elements, and wherein stop codons have been inserted 3' to the selectable marker for each of the three reading frames for the porcine α-1,3 galactosyltransferase gene.

74. The method of claim 51, wherein said disruption is within exon 4, exon 7, exon 8, or exon 9 of the porcine α-1,3 galactosyltransferase gene.

75. The method of claim 51, wherein said exogenous sequence is a selectable marker.

76. The method of claim 75, wherein said selectable marker is selected from the group consisting of the neo^R gene and the hyg^R gene.

77. The method of claim 51, wherein said exogenous sequence is flanked at its 5' and 3' ends by FRT DNA elements, and wherein stop codons have been inserted 3' to the selectable marker for each of the three reading frames for the porcine α-1,3 galactosyltransferase gene.